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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/658,158	09/08/2000	Samuel P. Weaver	19930-000500US	3287

7890 07/17/2003  
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EXAMINER

HEALY, BRIAN

ART UNIT	PAPER NUMBER
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2874

DATE MAILED: 07/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/658,158

Applicant(s)

WEAVER ET AL.

Examiner

Brian M. Healy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-66 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 55-66 is/are allowed.
- 6) ☐ Claim(s) 1,2,7,11-13,18,33,34,39,43-46 is/are rejected.
- 7) ☐ Claim(s) 3-6,8-10,14-17,19-32,35-38,40-42 and 47-54 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 September 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* If a claim for foreign priority is acknowledged, but the certified copies are not received,

A representation is made that the foreign priority claim is based on a duly filed application in a foreign country.

- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1. ☐ Information Sheet for Patenting of Inventions (PTO Form 100, Rev. 11-97)
2. ☐ Information Sheet for Patenting of Inventions (PTO Form 100, Rev. 11-97)
3. ☐ Information Sheet for Patenting of Inventions (PTO Form 100, Rev. 11-97)
4. ☐ Information Sheet for Patenting of Inventions (PTO Form 100, Rev. 11-97)

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## DETAILED ACTION

### *Allowable Subject Matter*

1. Claims 55-66 are allowed. None of the prior art of record teaches or suggests the claimed wavelength router for receiving a plurality of spectral bands and directing subsets of the spectral bands to one of a plurality of output ports including; a free-space optical train including a dispersive element and an array of optical routing mechanisms including a mirror and linear actuator.
2. Claims 3-6,8-10, 14-17, 19-32,35-38,40-42, and 47-54 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

None of the references of record teaches or suggest the wavelength router (and method utilizing same) which includes such features as a mirror which is perpendicular to the actuator axis, the use of a fixed reflective surface in perpendicular to the mirrored surface which is moved to a plurality of positions to form paths between the input and output ports of the claimed optical router mechanism. In addition, more detailed structural limitations are included in the claims including additional fixed reference mirrored surfaces used in conjunction first, second primary

*Claim Rejections - 35 USC § 102*

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3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(c) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1, 2, 7, 11, 33, 34, 39, and 43 are rejected under 35 U.S.C. 102(b) as being anticipated by Riza et al., U.S.P. No. 5,208,880.

Riza et. al. 880' teaches (Figs. 1-3) an optical router/switch device and method of using same comprising: at least one input port 105 configured to provide an optical signal; a plurality of actuators disposed to move the mirror 107 to a plurality of positions; and a mirror 107. In a first of such mirror positions the mirror is disposed such that the optical signal follows a first

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optical path from an input source to a first of a plurality of output ports with the first optical path reflecting off of the mirrored surface at either parallel to the actuator axis or at a 45 deg. angle in relation to the actuator axis, which clearly, fully meets Applicant's claimed limitations.

5. Claims 12,13, 18,44, 45 and 46 are rejected under 35 U.S.C. 102(a) and (e) as being anticipated by Edwards et. al., U.S.P. No.6,404,942 B1.

Edwards et. Al. 942' teaches (Figs.1-14) an optical routing apparatus (and method utilizing same) comprising: a plurality of first, second, third and fourth input ports 11 for switching plural optical signals to a plurality of output ports 19, 19' (first, second, third , fourth) using linearly movable mirrors 20 (Note the mirrors are parallel to the actuator axis) which are moved using actuators 23, 25 to a plurality of mirrored positions (Note mirrors appear to be double sided) , which clearly, fully meets Applicant's claimed invention.

A copy of PTO-1449 will be included in this office action.

The following references are also cited by the Examiner as being pertinent prior art:  
Bergmann et. al., U.S.P. No 6,031,946 (Figs 1-8B), Husain et. al., U.S.P. No 6,453,083 (Figs.1-16) and Koh, U.S.P. No. 6,363,183 (Figs.1-121).

Any questions concerning this office action should be directed to:

**Brian M. Healy**

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